



NEW YORK CITY DEPARTMENT OF

HEALTH AND MENTAL HYGIENE

Mary T. Bassett, MD, MPH *Commissioner*

2015 Veterinary Advisory # 1: 2014 Summary of Animal Rabies in New York City

- **In 2014, 12 animals from New York City tested positive for rabies**
- **Raccoon and bat rabies have been found in all five boroughs since 1992**
- **The last dog to test positive for rabies in NYC was in 1954**

Please share with your colleagues in Veterinary Medicine and your staff

January 27, 2015

Dear Veterinary Colleagues,

This advisory is a summary of 2014 rabies testing data from the New York City (NYC) Department of Health and Mental Hygiene (DOHMH). The most up-to-date information regarding rabies can be found on our website at <http://www.nyc.gov/html/doh/html/diseases/cdrab.shtml>. As in the past, urgent matters regarding rabies will be brought to your immediate attention via fax or email.

Between January 1 and December 31, 2014, 12 animals collected from two of the five NYC boroughs tested positive for rabies at the DOHMH: 6 raccoons and 1 skunk from Staten Island, and 4 raccoons and 1 opossum from Brooklyn. The number of rabid raccoons in Staten Island decreased from 49 in 2013 to 7 in 2014, similar to numbers seen prior to the 2013 raccoon rabies epizootic. Brooklyn had the highest number of rabid animals since rabies was first detected in the borough in 2010. No rabid animals were reported from Queens for the fourth year in a row and none from the Bronx for the first time since 1996.

Last fall the U.S. Department of Agriculture (USDA) and Cornell University conducted raccoon oral rabies vaccine (ORV) baiting in parts of southern Brooklyn and Queens, as well as Staten Island. The effort was part of a larger program to vaccinate raccoons in 17 states and to eliminate raccoon rabies from Long Island. Oral rabies vaccine was used in Nassau and Suffolk counties in 2006-2010, with the last cases of animal rabies detected in 2007 and 2009, respectively.

In Queens and Brooklyn, about 70 fixed bait stations were set up in wooded areas in September to distribute the fish-scented bait, which encloses a small packet of liquid vaccinia-rabies glycoprotein (V-RG) recombinant virus vaccine. A low-flying helicopter was used to distribute the bait in October in less-populated areas of Staten Island. In November, raccoons were trapped and a blood sample collected to measure the level of rabies virus-neutralizing antibodies and assess the effectiveness of ORV. Veterinary alerts and press releases were sent out prior to each event with guidance for human or pet exposures to the bait. One contact incident was reported to the DOHMH: on a wooded path in Staten Island, a dog ingested and later vomited a bait packet whereupon the owner safely removed other intact baits from the area.

Throughout the US, different variants of the rabies virus are maintained in their respective vectors, following geographically distinct patterns. The raccoon variant is present along the Atlantic Coast and the bat variant throughout the US except Hawaii. Since the arrival of raccoon rabies in NYC in 1992, it has persisted enzootically, and raccoons remain the primary reservoir species in the City (**Table 1**). Occasionally, rabid raccoons transmit the virus to other wild animals, usually skunks. Historically, most rabid animals have been identified in the Bronx

and Staten Island, with isolated reports of rabid raccoons in Queens and Brooklyn. The one exception was the large epizootic of raccoon rabies that occurred in Central Park from 2009 to 2011.

A much smaller number of rabid bats have been found in all 5 boroughs. Bats are the primary vector of human rabies infections in the US. Dogs and cats are also susceptible to rabies; however, vaccination and animal control have significantly reduced the numbers of rabid dogs and cats both in NYC and throughout the US. No rabid dogs have been reported in NYC since 1954, although dogs infected with the raccoon variant have been reported in neighboring areas outside NYC. Since 1992, only 14 rabid cats have been identified in NYC, 12 of which were strays.

Rodents (e.g., squirrels, rats, mice) and members of the rabbit family are not considered to be vectors of rabies. The one exception is the groundhog, which has tested positive for rabies in NYC (one in 2007 on Staten Island) and surrounding areas. Rabies infections in domestic rodents or rabbits should be considered only in unusual circumstances, such as when the animal has a history of a bite wound and has been housed in an outdoor hutch or when a rabies vector species (e.g., raccoon) has been observed in the vicinity.

Please review the annual summary, along with comparative data from the previous three years. For issues regarding rabies or other public health related issues call the provider access line (PAL) at 1-866-692-3641. For specific questions regarding the summary, general questions regarding rabies, or for consultation regarding rabies titer testing, rabies exposures or rabies vaccinations for you or your staff, please contact Dr. Sally Slavinski at 347-396-2672. To report an animal bite or for more information about pets that have been bitten, please contact Veterinary Public Health Services at 646-632-6604 or 646-632-6074.

As always, we greatly appreciate your partnership and cooperation.

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Table 1. Laboratory-Confirmed Rabid Animals Tested in NYC, 1992-2014

SPECIES	BRONX	BROOKLYN	MANHATTAN	QUEENS	STATEN ISLAND	TOTAL POSITIVE	TOTAL TESTED	% POSITIVE
Raccoon	184	9	145	10	177	525	6651	7.9
Skunk	43	0	0	0	5	48	300	16.0
Bat	14	6	12	4	6	42	967	4.3
Dog	0	0	0	0	0	0	1930	0
Cat	3	1	2*	0	8	14	3021	0.5
Other**	3	1	0	1	4	9	2135	0.4
Total	247	12	159	15	200	638	15004	4.3

*One cat from Columbia County and one cat from New Jersey were tested in NYC.

**Other includes 2 coyotes (1999 and 2010, Bronx), 6 opossums (1992, 1994, 2010 Queens, 2011 Bronx, 2013 Staten Island, 2013 Brooklyn), and 1 groundhog (2007, Staten Island).

Table 2. 2014 Summary of Animal Rabies Testing Performed by NYC Rabies Laboratory

SPECIES	BRONX		BROOKLYN		MANHATTAN		QUEENS		STATEN ISLAND		OUTSIDE NYC		TOTAL	
	# tested	# positive	# tested	# positive	# tested	# positive	# tested	# positive	# tested	# positive	# tested	# positive	# tested	# positive
Bat	5	0	5	0	8	0	7	0	3	0	1	0	29	0
Cat	11	0	35	0	18	0	14	0	12	0	1	0	91	0
Dog	7	0	9	0	7	0	8	0	5	0	2	0	38	0
Groundhog	0	0	0	0	0	0	0	0	3	0	0	0	3	0
Opossum	2	0	26	1	0	0	35	0	5	0	0	0	68	1
Raccoon	23	0	34	4	10	0	73	0	19	6	0	0	159	10
Skunk	3	0	0	0	2	0	1	0	1	1	0	0	7	1
Other*	0	0	1	0	3	0	0	0	2	0	1	0	7	0
Total	51	0	110	5	48	0	138	0	50	7	5	0	402	12

*Other animals = 1 rabbit, 4 squirrels, 1 gopher, 1 mouse

**Table 3. Animal Rabies Testing Performed by NYC Rabies Laboratory in 2014
Compared to Previous Years by Species**

ANIMAL	2011		2012		2013		2014	
	# tested	# positive						
Bat	20	3	37	3	44	5	29	0
Cat	88	1	77	0	89	1	91	0
Dog	28	0	26	0	35	0	38	0
Fox	1	0	0	0	0	0	0	0
Groundhog	0	0	2	0	2	0	3	0
Coyote	1	0	1	0	0	0	0	0
Muskrat	0	0	1	0	1	0	0	0
Opossum	26	0	35	1	76	1	68	1
Rabbit	1	0	0	0	0	0	1	0
Raccoon	144	9	194	9	201	46	159	10
Skunk	5	0	11	0	20	4	7	1
Squirrel	0	0	1	0	3	0	4	0
Other	1	0	0	0	1	0	2	0
Total	315	13	387	13	472	57	402	12

**Table 4. Animal Rabies Testing Performed by NYC Rabies Laboratory in 2014
Compared to Previous Years by County**

COUNTY	2011		2012		2013		2014	
	# tested	# positive						
BRONX	61	9	58	3	102	3	51	0
BROOKLYN	54	0	90	2	82	2	110	5
MANHATTAN	79	3	82	2	68	2	48	0
QUEENS	71	0	106	0	89	0	138	0
STATEN ISLAND	46	0	51	6	125	49	50	7
OUTSIDE NYC	4	1	0	0	6	1	5	0
Total	315	13	387	13	472	57	402	12